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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,324	05/24/2001	Mitsunori Maruyama		1377

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EXAMINER

CHANG, VICTOR S

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 11/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/863,324

Applicant(s)

MARUYAMA ET AL.

Examiner

Victor S. Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,6,8,9 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,8,9 and 13-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Introduction

1. The Examiner has carefully considered Applicants' remarks filed on 9/16/2005.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Rejections not maintained are withdrawn.

Rejections Based on Prior Art

4. Claims 1, 2, 5, 6, 8, 9 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 63-132097 (translation submitted with IDS filed 2/3/04, and translation by ELS, Inc.) in view of Mori et al. (US 5051295), and as evidenced by Applicants' admission, generally as set forth in section 4 of Office action dated 5/16/2005, together with the following response to argument.

For the purpose of clarification, the Examiner repeats the relied upon prior art as follows: JP '097 is directed to a transfer sheet comprising a releasing sheet (support), a cured resin layer (protective layer) of electron beam (ionization radiation) curable resin and a curable adhesive layer (claim 1 of JP '097). JP '097 teaches that the adhesive layer is cured after transferring by exposing to an ionizing irradiation (claim 3 of JP '097), and the suitable composition for the curable adhesive layer is the same as the curable resin used to form the cured resin layer (translation, page 2, last two lines). JP '097 also expressly teaches that the EB (electron beam) curable resin is a mixture of

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one or more kinds of prepolymer and oligomer having an ethylene unsaturated bond in a monomer, a monomer having an ethylene unsaturated bond and/or polythiol compounds having two or more of thiol groups in a molecule can be used. Examples of the prepolymer and oligomer include urethane acrylate, melamine (meth)acrylate, etc. Examples of monomer include methyl acrylate, 2-ethylhexyl acrylate, acrylamide, etc. (translation, page 2, top paragraph). For claim 1, it should be noted that: 1) prepolymer and oligomer having an ethylene unsaturated bond in a monomer clearly encompasses a free radical polymerized polymer; 2) Applicants have specifically defined the “heat-reactive resin” as a resin comprising monomer unit which has a heat-reactive functional group, such as a carboxy group, a hydroxy group, a tertiary amino group, an amide group, etc., (specification, page 12, bottom paragraph), as such since JP ‘097 expressly teaches that exemplary monomers for forming the curable resin including monomers such as acrylamide, etc., as set forth above, it reads on the heat-reactive curable resin as claimed; and 3) JP ‘097 also expressly teaches that the prepolymer, oligomer, and monomers can be mixed arbitrarily to prepare a coating composition (translation, page 2, second paragraph), as such the teachings of JP ‘097 clearly encompass an adhesive layer which is a mixture of ionizing radiation curable resin (e.g., acrylic prepolymer, oligomer, and monomer) and a heat-reactive resin (e.g., an acrylamide containing resin) which is different from said ionizing curable resin.

Applicants’ argument “The examiner is improperly interpreting JP ‘097 as teaching the curable composition ... as including an acrylamide-containing resin obtainable only as the cured product of the same curable composition ... the examiner

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is confusing the curable resin composition described at the top of page 2 of the translation with the cured resin product obtained therefrom. Only the cured resin product of JP '097 would contain what the examiner characterizes as the acrylic copolymer, heat-reactive resin. A distinction must be drawn between the acrylamide monomer-containing curable resin ... and the cured product obtained therefrom."

(Remarks, pages 1-3) has been carefully considered, but is not persuasive. It appears that Applicants are under the impression that the EB (electron beam) curable resin of JP '097 is a mixture of one or more kinds of prepolymer and oligomer having an ethylene unsaturated bond in a monomer, **and** a monomer having an ethylene unsaturated bond, etc. The Examiner wish to emphasize that the curable resin of JP '097 is a mixture of one or more kinds of "prepolymer and oligomer having an ethylene unsaturated bond in a monomer", and the list of monomers disclosed by JP '097 is merely monomers suitable for forming the prepolymer and oligomer. Clearly, Applicants have mischaracterized the teachings of JP '097. As a further evidence, a copy of translation of JP '097 by FLS, Inc. is attached, in which, JP '097 clearly teaches that the prepolymers or oligomers are formed from monomer containing an ethylene unsaturated bond, and examples of such monomers are listed, including acrylamide, which forms a heat-reactive curable resin, as set forth above (see translation by FLS, Inc., pages 5-6, bridging paragraph). Applicants' argument is without merit to the present rejection.

With respect to Applicants' argument "... the product ("cured resin layer") obtained by UV or EB curing of that reaction mixture is a single, homogeneous resin.

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Assuming, arguendo that ... a cured single homogeneous resin is a heat-reactive resin, how would JP '097 lead one skilled in the art from that homogeneous cured layer to adhesive layer of applicants' claim 1 defined (1) as "curable" and (2) as containing two different resins?" (Remarks, page 4), the Examiner notes that since JP '097 expressly teaches curable resin is a mixture of one or more kinds of prepolymer and oligomer having an ethylene unsaturated bond in a monomer, and also expressly teaches that the prepolymer, oligomer, and monomers can be mixed arbitrarily to prepare a coating composition, as such the teachings of JP '097 clearly encompass an adhesive layer which is a mixture of ionizing radiation curable resin (e.g., acrylic prepolymer, oligomer, and monomer) and a heat-reactive resin (e.g., an acrylamide containing resin) which is different from said ionizing curable resin. In other words, Applicants' argument (assuming that a heat-reactive resin must be formed as a single, homogeneous resin together with the ionizing curable resin) essentially argues again that the teachings of EP '097 limits the use of acrylamide as a monomer, the Examiner repeats that JP '097 merely teaches that acrylamide is an exemplary monomer for forming the curable resin, as set forth above, Applicants' argument to the contrary notwithstanding.

With respect to Applicants' argument "In the teaching of Mori ... it is the acrylate monomer reactant which is described as having the pendant hydroxyl group, not the polyurethane acrylate prepolymer obtained therefrom ... reaction is not a free radical reaction ..." (Remarks, page 5), the Examiner notes that Applicants' argument deliberately overlooks the fact that the above-mentioned teachings of JP '097 are not relied upon in the prior Office action. In particular, the Examiner repeats that (see Office

action dated 10/1/2004, page 6) that Mori also expressly teaches alternative equivalent curable compounds which are formed by an inherently free radical photopolymerization of hydroxyl containing acrylate monomers, such as 2-hydroxyethyl acrylate, 2-hydroxypropyl acrylate, etc., Applicants' argument to the contrary notwithstanding.

With respect to Applicants' repeated argument "a substitution of monomers would not give the heat reactive resin which is defined by claim 1 ... the cured product of JP '097 ... is neither a curable layer nor a mixture of two different resins." (Remarks, Page 6, top paragraph), the Examiner again repeats that JP '097 merely teaches that acrylamide is an exemplary monomer for forming the curable resin, as set forth above, Applicants' argument to the contrary notwithstanding.

With respect to Applicants' argument "The examiner ... argued that JP '097 teaches that the suitable composition for the curable adhesive layer is the same as the curable resin used for form the cured resin layer." The translation of Japanese '097 actually states that "the aforementioned ionizing radiation curable resin can be used for the resin constituting the curable adhesive layer." ... However, the two layers cannot be the same because JP '097 describes its adhesive layer as "curable" ... whereas it describes the protective layer of the transfer element as a "cured resin layer." (Remarks, page 6), the Examiner asserts that the above-mentioned teachings of JP '097 clearly shows that, prior to curing, the compositions for forming the cured resin layer and the curable adhesive layer can be the same, nowhere the Examiner has taken the position that the two layers are the same, Applicants' argument is without merit.

With respect to Applicants' argument "The two layers of JP '097 are intended to provide different functions. The adhesive layer is intended to provide adhesiveness to the object to which the layers are transferred and the "cured resin layer" is intended to provide "a good surface property." Assuming, arguendo, that Mori et al would motivate one skilled in the art to modify one of the two layers, it does not logically follow that such motivation would lead one skilled in the art to modify both layers, simply because (allegedly) the two layers are the same prior to modification." (Remarks, page 7, top paragraph), the Examiner respectfully reminds Applicants that JP '097 expressly teaches that the ionizing radiation curable resin for forming the "cured resin layer" can be used for the resin constituting the curable adhesive layer, nowhere is there a teaching that the compositions of the two layers must be different, Applicants' argument it without merit.

Finally, with respect to Applicants' argument "it might be argued that it would have been obvious to incorporate the compounds disclosed by Mori et al. into the "cured resin layer" of Japanese '097 because "the protective film" of Mori et al. and the "cured resin layer" of Japanese '097 are intended to provide the same function. However, it would be nonsensical to modify an adhesive layer to impart the adhesive layer with any quality attributed by Mori et al. to the "protective film." (Remarks, pages 7-8, bridging paragraph), the Examiner notes that Applicants appear to have admitted that it would have been obvious to modify the "cured resin layer" of JP '097 in view of Mori, motivated by providing the same function. Further, since JP '097 also expressly teaches that the ionizing radiation curable resin for forming the "cured resin layer" can

be used for the resin constituting the curable adhesive layer, as set forth above, the Examiner asserts that the teachings of JP '097 in view of Mori read on the instant invention as claimed.

Conclusion

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S. Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VSC
Victor S Chang
Examiner
Art Unit 1771

10/19/2005


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